Please replace the paragraph beginning on page 3, line 6 with the following new paragraph:

A3

Although the impurities existing in the Ta_2O_5 thin film may be removed by conducting a low-temperature heat treatment two or three times, (for example, a plasma N_2O or UV-O_3 treatment) these processes can be complex and their results unreliable. Furthermore, these processes have a drawback in that they will induce oxidation of the lower electrode at its interface with the Ta_2O_5 thin film.

Please replace the paragraph beginning on page 6, line 6 with the following new paragraph:

A4

Fig. 5 is a schematic view illustrating a procedure for removing oxygen vacancies and carbon compounds by conducting an annealing process for a deposited TaON thin film of a multi-layer structure in accordance with the method of the present invention.

Please replace the paragraph beginning on page 7, line 1 with the following new paragraph:

A5

In order to connect each capacitor to an associated one of the active regions of the silicon substrate 10, the interlayer insulating film 20 is then selectively removed in accordance with conventional photolithography and etch processes, to form contact holes (not shown).

Please replace the paragraph beginning on page 7, line 23 and ending on page 2, line 2 with the following new paragraph:

A6

Furthermore, nothing in the present invention prevents the lower electrodes from having a structure that is a simple stack shape or more complex structure such as a cylinder shape, a fin shape, and a stack cylinder shape.

Please replace the paragraph beginning on page 9, line 18 and ending on page 10, line 4 with the following new paragraph:

A7

Another technique for preventing the formation of a non-uniform natural oxide film on the lower electrodes and thereby prevent the subsequent generation of leakage current at the lower electrodes, involves feeding the wafer into a low-pressure chemical vapor deposition (LPCVD) chamber under a low pressure of typically less than 10 torr, and

A7 subjecting the wafer to an oxidation process using plasma in an in-situ H_2O atmosphere to homogeneously oxidize the surface of the lower electrodes, to form an exceedingly thin but uniform oxide film (not shown) having a thickness of 10 Å or less.

Please replace the paragraph beginning on page 13, line 10 with the following new paragraph:

A8 After the second TaON thin film 32b is deposited over the first TaON thin film 32a, it is subjected under a N_2O or NH_3 atmosphere, to an annealing process in an electric furnace for 5 to 60 minutes or to a rapid thermal process for 1 to 10 minutes. In accordance with this procedure, and as was the case with the first TaON thin film 32a, volatile carbon compounds and H_2O in the second amorphous TaON thin film 32b are completely removed. Similarly, the second TaON thin film is induced to crystallize, thereby avoiding a generation of leakage current.

Please replace the paragraph beginning on page 14, line 1 with the following new paragraph:

A9 Further, the deposition of the amorphous TaON thin films and the subsequent annealing of those deposited layers serve to eliminate structural defects, such as micro cracks and pin holes, at interfaces while producing a homogenous dielectric thin film.

[Please replace the paragraph beginning on page 14, line 6 with the following new] paragraph:

As is apparent from the above description, the methods for fabricating capacitors for semiconductor devices in accordance with the present invention provide various effects.

Please replace the paragraph beginning on page 15, line 3 with the following new paragraph:

A10 That is, in accordance with the present invention, it is possible to control and establish the equivalent oxide film thickness for the TaON dielectric film of 25 Å or less, as compared to conventional Ta_2O_5 dielectric films in a metal-insulator-silicon (MIS) structure. This makes it possible to obtain the high levels of capacitance required for the operation of DRAMs of grade 256 MB and higher.

Please replace the paragraph beginning on page 15, line 10 with the following new paragraph:

A11

In accordance with the present invention, the formation of the dielectric film is achieved by depositing a TaON thin film and treating the deposited film with a plasma process in an in-situ fashion in a LPCVD chamber. Accordingly, it is possible to eliminate the rapid thermal process conventionally conducted in a nitrogen atmosphere just prior to the deposition of conventional dielectric films. Further, it is possible to eliminate low-temperature and high-temperature thermal treatments typically conducted after the deposition of conventional dielectric films.

Please replace the paragraph beginning on page 15, line 20 and ending on page 16, line 2 with the following new paragraph:

A12

With the improved dielectric constant, the present invention can reduce the number of unit processing steps used and the processing time by rendering it unnecessary to use any process steps for increasing the surface area of lower electrodes to obtain a high dielectric constant. Accordingly, it is possible to reduce the manufacturing costs while improving productivity.

Please see the attached Appendix for the changes made to effect the above paragraphs.

IN THE CLAIMS:

Claims 1, 2, 19, and 20 have been amended as follows:

A13

Sub B1

1. (Amended) A method for fabricating a capacitor of a semiconductor device, the method comprising:

forming a lower electrode on a semiconductor substrate;

forming a dielectric layer on the lower electrode by

forming a first amorphous TaON thin film on the lower electrode;

annealing the first amorphous TaON thin film in an NH_3 atmosphere;

forming a second amorphous TaON thin film on the lower electrode; and